

REMARKS

Claims 1-12, 15, and 17-22 are pending in the present application. Claims 1-12 and 15 stand rejected. Claim 1, 11, and 15 have been amended. Claims 8-10 have been cancelled without prejudice. Claims 17-22 have been added.

Requirement for Information

The Examiner (in page 2 of the Office Action) has requested a technical research report entitled, "Indexing weighted-sequences in large databases" (See H. Wang, C. Perng, W. Fan, S. Park, P. Yu, Indexing weighted-sequences in large databases, Technical Report Research Report, IBM, 2/2002). It is believed that the requested document is an internal document that is not publicly available. At this point, the requested document cannot be readily obtained.

In any event, the Examiner should note that some or all of the subject matter contained in the requested document is seemingly incorporated (See 1st bullet of 'Our Contributions', p. 2) into the article entitled, "Indexing weighted-sequences in large databases" (See H. Wang, C. Perng, W. Fan, S. Park, P. Yu, Indexing weighted-sequences in large databases, ICDE'03, March 5/8/2003, pgs 63-74) (hereinafter referred to as "first paper"). In this regard, the Examiner is already in possession of at least part, if not all of the requested information.

Declaration under 37 C.F.R. 1.132

The Examiner (in pages 2-3 of the Office Action) states that the previously presented 1.132 affidavit is insufficient because the evidence of record contains contradictory information. It is respectfully submitted that the Examiner's findings of

contradictory information are erroneous as a matter of law and fact. The Examiner has not demonstrated that there is any contradictory evidence regarding inventorship and has no basis to challenge the veracity of the inventor's statements regarding inventorship.

First, the Examiner asserts that authorship is usually listed in order of contribution and that the listing of Phillip Yu's name after the name of non-inventor Sanghyun Park's suggests a contribution by Mr. Park that is at least equivalent to that of Mr. Yu.

However, this finding is seemingly nothing more than the Examiner's belief or opinion as to the correlation between contribution and listing of authorship. The Examiner does not offer any evidence or legal authority to support this finding. Moreover, the Examiner has not explained how "contribution" to authorship of a paper correlates to "inventorship" as a matter of law. Indeed, the Examiner fails to recognize that on a legal basis, the designation of authorship does not raise a presumption of inventorship. ..." (See MPEP 716.10). In short, the Office Action is devoid of any explanation as to how an individual's "contribution" to paper relates to inventorship of subject matter contained in the paper.

Secondly, the Examiner cites an IEEE guideline regarding authorship and a passage in the first paper (in col. 1, p.3) that states, "we motivate our work," as further proof of inventive contribution by the non-inventor Sanghyun Park. Again, the Examiner's findings in this regard are irrelevant and fail to establish "contradictory evidence's sufficient to challenge the veracity of the inventor's statements.

The IEEE guideline states that the IEEE affirms that authorship credit must be reserved for individuals who have met each of the following conditions:

- a. Made a significant intellectual contribution to the theoretical development, system or experimental design, prototype development, and/or the analysis and interpretation of data associated with the work contained in the manuscript;*
- b. Contributed to drafting the article or reviewing and/or revising it for intellectual content; and*
- c. Approved the final version of the manuscript as accepted for publication, including references.*

The above IEEE guidelines provides that “authorship” can be established for a person who could have made a *contribution to the analysis and interpretation of data associated with the work contained in the manuscript, contributed to drafting the article or reviewing and/or revising the article and approved the final version of the manuscript*. The Examiner has not explained how meeting these conditions for “authorship” relates to conditions for establishing “inventorship”. In any event, it is clear that the IEEE guidelines are NOT legal guidelines for establishing “inventorship” under the Patent Laws and clearly do not set forth legal conditions and requirements for establishing inventorship of a patent application. Again, the Examiner fails to recognize that the designation of authorship does not raise a presumption of inventorship, ...” (See MPEP 716.10).

Moreover, the Examiner’s reliance on the phrase “we motivate our work” as providing contradictory evidence of authorship is without merit and does not conclusively prove an inventive contribution by the non-inventor Mr. Park to the claimed inventions. Indeed, the term “work” does not directly correlate to “inventorship”. The term “work” is not defined in the paper to be “inventorship”. Nor has the Examiner explained how the term “work” correlates with the requirements of inventorship under the Patent Laws.

As further “proof of contradictory evidence”, the Examiner finds that Applicant’s 1.132 affidavit refers to non-inventor Mr. Park as a graduate student, which is purportedly contradicted by an affidavit in another application 10/723,206 which lists non-inventor Mr. Park as a post-doctoral employee of IBM and a resume archived on 3/21/2006 that indicates non-inventor Mr. Park was an assistant professor at POSTECH. Even assuming that there is some disparity in the designation of non-inventor Mr. Park as a “graduate student” and a “post-doctoral employee”, the Examiner has not explained how this factual disparity raises contradictory evidence with regard to “inventorship”. The standard is not whether the record contains contradictory information, but whether the record contains contradictory evidence of inventorship (See MPEP 716.10).

Here, the Examiner’s reliance on this purported factual disparity as to Mr. Park’s title is wholly misplaced and simply irrelevant to the issue of inventorship. Moreover, the Examiner has not explained why a “post-doctoral” employee cannot be considered, on a general level, a “graduate student” employee. In short, the Examiner can not establish contradictory evidence of inventorship based on a matter of semantics with regard to issues that are irrelevant to inventorship.

Accordingly, for at least the foregoing reasons, the Examiner has no basis to challenge the veracity of the inventors’ statements declaring that Mr. Park had no inventive contribution to the claimed inventions of this application. It is not understood why the Examiner has such an aversion to accepting the truth of the inventors’ statements regarding the lack of inventorship of Mr. Park, but instead continues to challenge the veracity of the inventors’ statements with reliance on irrelevant information and improper legal standards that have nothing to do with establishing inventorship. It is incumbent on

the the Examiner to provide relevant contradictory evidence, otherwise, the Examiner must withdraw the finding of insufficiency of the 1.132 declaration filed on 9/21/2006.

Claim Rejections – 35 U.S.C. § 101

Claim 15 stands rejected under 35 U.S.C. § 101. The Examiner states (in para. 2 of the Office Action) that claim 15 fails to positively recite the act of executing the steps of the method to generate a useful, concrete, and tangible result. This rejection is legally deficient as a matter of law and fact. The Examiner improperly construes claim 15 as a method or process that does not produce useful and tangible results. The Examiner fails to recognize that the claimed inventions relates to *a program storage device having executable program instructions*. The Examiner's finding of non-statutory subject matter based on the fact that if the instructions are not executed, the claimed invention does not produce a result, is irrelevant, and way off point. It is not necessary for a claim directed to a device or machine to be drafted in a way that the device/machine is actually operating or functioning to produce some result, in order to meet the requirements under 101. In fact, Examiners typically reject and refuse to consider functional language of a claim directed to an apparatus, device, or machine. Thus, the Examiner's rejection is seemingly erroneous as a matter of law. The rejections under 35 U.S.C. 101 should be withdrawn.

Claim Rejections – 35 U.S.C. §102(b)

Claims 1-8, 12 and 15 stand rejected under 35 U.S.C. 102(b) as being anticipated by the paper entitled "An index structure for pattern similarity searching in DNA

microarray data” (See H. Wang, C. Perng, W. Fan, P. Yu, An index structure for pattern similarity searching in DNA microarray data, IEEE Computer Society 14-16, Aug/2002, pgs 256-267) (hereinafter referred to as “second paper”), as set forth by the Examiner in paragraphs 5-14 of the Office Action.

Independent claims 1 and 15 have been amended to incorporate subject matter from claims 8, 9, and 10 which have been cancelled without prejudice. For example, claims 1 and 15 have been amended to recite, *inter alia*, receiving a sequence comprising one or more pairs of symbol and weight elements, the symbol elements corresponding to a non-uniform frequency distribution and reordering the one or more one-dimensional sequences using the non-uniform frequency distribution to generate a new sequence, and inserting the new sequence as one or more trie nodes into a trie structure, which is not present in the second paper. Accordingly, the second paper fails to anticipate claims 1 and 15. Moreover, claims 2-7 and 11-12 are believed patentable over the second paper at least by virtue of their dependence from claim 1, and newly added claims 17-22 are believed patentable over the second paper at least by virtue of their dependence from claim 15. Accordingly, withdrawal of the rejections under 35 U.S.C. § 102(b) is requested.

Claim Rejections – 35 U.S.C. §102(a)

Claims 1-12, and 15 stand rejected under 35 U.S.C. §102(a) as being anticipated by the first paper, as set forth by the Examiner in paragraphs 16-28 of the Office Action. Again, this rejection is legally deficient as a matter of law and fact and has been rendered moot for all previously asserted reasons. The first paper does not qualify as prior art

under §102(a) because the first paper was published less than one year before the filing date of the application and solely describes Applicants' own work, as indicated in the previously submitted declaration under 37 C.F.R. § 1.132. As noted above, the Examiner has not presented any sound legal or factual reasons that would establish contradictory evidence to challenge the veracity of Applicant's statements regarding authorship. This rejection should be withdrawn.

Submitted,

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